



GLIDER PROGRAM



May 2004

Civil Air Patrol Glider Program

Index

	Page
Purpose	3
Goals	3
Glider Program History	3
Original Glider Acquisition Legal Opinion	4
Demonstrated Need and Glider Deployment	4
Fleet Size Goal – Ute Rate – Requirements for Glider Acquisition and Retention	5
CAP Glider Minor Maintenance Reimbursement	7
Glider Needs in the CAP Program Objective Memorandum (POM)	8
Glider Acquisition	9
CAP Glider Training Plan	10
CAP Glider Launch Procedures	11
Suggested Changes to AFI10-2701	12

Attachment 1 – CAPM 50-14, dated March 1961

Attachment 2 – HQ CAP-USAF Logistics Support for the CAP Glider Program letter

Attachment 3 – Blanik L-23 Deployment Plan

Attachment 4 – National Executive Committee Agenda Item 10

Attachment 5 – 1998 CAP/SSA Glider Program Guidance

Attachment 6 – CAP Glider Flight Reimbursement Rate Staff Summary Sheet

Attachment 7 – Glider Needs in the CAP Program Objective Memorandum (POM)

Attachment 8 – August 2001 National Board Minutes

Attachment 9 – Sole Source Justification for Blanik L-23 gliders

Attachment 10 – Blanik L-23 Purchase Staff Summary Sheet

Attachment 11 – CAP Glider Training Plan

Civil Air Patrol Cadet Glider Program

Purpose

The purpose of the Civil Air Patrol Cadet Glider program is to inspire our cadets to seek aerospace careers while providing a quality aviation experience.

Goals

Provide an outstanding aviation experience for as many CAP Cadets as possible, while growing the CAP Glider Program to meet future cadet glider flight requirements.

Provide a professional volunteer senior member pilot force that is current and proficient in glider operations ensuring a safe and productive flying environment for CAP cadets.

Glider Program History

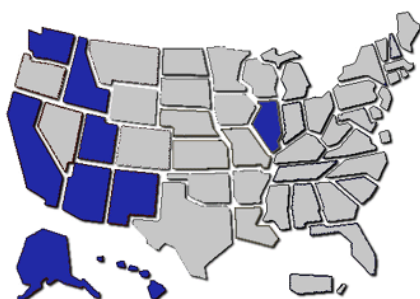
Since the 1960's CAP has had a glider program in place. The early program was mainly focused in the western part of the United States. See *attachment 1*.

In the fall of 1995 the Soaring Society of America (SSA) expressed an interest in partnering with CAP in the promotion of soaring in the United States. SSA had various assets, gliders and personnel, located in their SAA affiliate clubs across the nation while CAP had 25,000 aviation minded young people. SSA realized their membership was aging and the ability to introduce soaring to youth was vital to SSA's future. Initial meetings with SSA leaders and HQ CAP officials determined a relationship would be beneficial to both organizations and a Memorandum of Understanding was signed in February 1996.

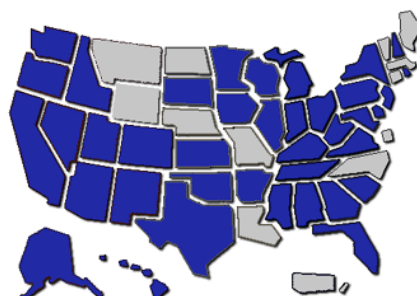
In May of 1997 the NEC, HQ CAP/DO and HQ CAP-USAF/LGM purchased a Blanik L-23, two-place training glider, with corporate funds for the purpose of conducting a test to assure a glider flight activity could be integrated into a normal CAP wing. The Georgia wing was selected due to its close proximity to CAP/HQ and strong SSA support. The test was successful and was briefed to the CAP National Executive Committee in November of 1998.

From that time, the CAP glider program, with assistance from new CAP members from SSA affiliate clubs has experienced explosive growth, fulfilling SSA's need to plant the seed of soaring and CAP's mandated requirement to introduce its cadets to aviation.

1995



2003



Currently CAP has 38 operating locations with several wings expressing interest in the program.

The glider program provides an additional avenue as well as an inexpensive method to introduce our cadets to a quality flight experience. Program growth has confirmed the program need and that our customer base (CAP Cadets) wants the product.

Original Glider Acquisition Legal Opinion

From the beginning it became apparent that SSA affiliate club assets could not fill the demand and the CAP corporate glider fleet would have to be increased if the program was to progress.

Prior to acquiring the gliders a question was raised. Could CAP use appropriated funds to purchase CAP corporate gliders? CAP-USAF/FM sought a legal opinion from CAP-USAF/ JA as to the legality of using appropriated funds to purchase the gliders. On March 14, 1997, CAP-USAF/JA issued an opinion stating the use of 3010 money for the purchase of CAP corporate gliders was appropriate. See *attachment 2*.

On 21 November 1998 the glider program was briefed to the CAP National Executive Committee and an acquisition plan presented to the National Executive Committee (NEC). The NEC approved the acquisition of 15 Blanik L-23 gliders and a Blanik L-23 Deployment Plan was developed. See *attachment 3 & 4*.

Demonstrated Need and Glider Deployment

A part of the 1998 CAP National Executive Committee approval was a method to deploy gliders to units with some assurance the glider asset would be used in a manner that would ensure the mission accomplishment.

To date, we at HQ CAP have acquired and fielded gliders based on "Demonstrated Need".

The 1998 Glider Guidance Letter (see *attachment 5*) sets forth methods for CAP units to start a CAP glider flight activity.

In 1998 HQ CAP/DO established an on-line glider reporting system (see glider reports at <https://ntc.cap.af.mil/ops/form18/index.cfm?>). This system allows HQ CAP/DO to see reported activity. Prior to acquiring and fielding a glider, HQ CAP/DO looks for the following demonstrations:

1. Activity on the CAP on-line reporting system using member furnished equipment at a level of 50 glider sorties in member furnished glider assets in a 6-month period. (This ensures the activity has CAP glider personnel capable of completing the mission.)
2. A statement of intended support via a written request from the requesting wing commander.

3. Willingness of the wing commander to equip an existing CAP corporate airplane asset with tow equipment and to dedicate said airplane in support of the glider program.
4. The appointment of Wing Glider Program Manager with a strong SSA background. (The initial glider test pointed out it was more important to have a new CAP member with a strong glider background than a seasoned CAP member with little glider experience. Fortunately several CAP members have strong backgrounds in both areas.)
5. Contact between the Wing Glider Program Manager and HQ CAP/DOT to ensure adequate CAP glider flight instructors and cadet orientation pilots are in place and lines of communication are established.

A Growing Program - The CAP Glider Program continues to grow with glider sorties growing at a rate of 2000+ sorties per year. Our current goal, utilization rate, glider acquisition procedures, and asset retention procedures are based on a growing program and may require adjustment in the future.

Fleet Size Goal – Utilization Rate – Requirements for Glider Acquisition and Retention

The following items establish requirements that ensure CAP Glider assets are flown, acquired, and retained in such a manner that enhances the glider program's ability to effectively complete its overall goal while serving the CAP Cadet community in the most effective manner.

Fleet Size Goal
<p>A national fleet size that equates to an average of 2 gliders in each CAP Wing.</p> <p>CAPP 52-7 allows each cadet to obtain 5 glider orientation flights during his/her cadet career (average 3 years). Two gliders per wing will allow CAP to work toward fulfilling CAP's commitment to the cadet population.</p>

CAP Glider Utilization Rate
<p>208 Glider sorties per aircraft per year.</p> <p>Justification</p> <p>Assumptions</p> <ol style="list-style-type: none"> 1. 99 % of CAP Glider Activities will be completed on the weekend. 2. 26-weekends (52 days) of glider operations available (Figure adjusted to consider soaring season in different geographical areas). 3. Eight sorties per weekend. <p>26 weekends x 8 sorties = 208</p>

Requirements for Glider Acquisition

Initial acquisition - Wing's attempting to start a glider program.

To be considered for the deployment of a corporate glider, each wing will demonstrate program structure and personnel are in place by flying 50 B-15 or B-16 glider sorties in accordance with CAPR 60-1 during a six month period .

Additional acquisition - Wing's with existing CAP corporate glider assets may be considered, funds permitting, for additional glider assets by averaging 50% above the individual CAP Glider Utilization Rate for the gliders assigned over a one year period.

Requirements to Retain CAP Glider Assets

Each CAP Wing will report glider activity via the HQ On-line Glider Reporting system.

Each CAP Wing with a CAP Glider Activity will average the CAP Glider Utilization Rate on an annual basis. Wing annual rates of 50 or more sorties below the CAP Glider Utilization Rate, for 2 years running, will result in possible redistribution of glider assets.

Sortie rates during the glider acquisition year will not be counted against the retention requirement.

Demonstrated Need

Glider will continue to be purchased and deployed using demonstrated need.



CAP Glider Minor Maintenance Reimbursement

Prior to National Headquarters Glider Program expansion there was no glider minor maintenance reimbursement rate established. However, with the inclusion of glider flights in the CAP Orientation Flight Program in accordance with CAPR 52-16 minor maintenance for CAP orientation glider flights became an issue as the cost for minor maintenance for Cadet orientation flights, unlike the powered orientation flights, was being borne by the local CAP glider unit. In FY 2001 HQ CAP/LG/DO/FM decided to justify a glider minor maintenance rate by paying actual minor maintenance expenses during FY 2002 and comparing those expenses to the number of flights flown for the same time period.

13 wings submitted minor maintenance invoices to HQ CAP/LGM for payment. These invoices totaled \$23,498. HQ CAP/DO reported 8,965 glider flights for fiscal year 2002.

In order to normalize the average cost per glider flight the calculation by HQ CAP/LGM was conducted by two methods:

- **Method 1:** The total reported minor maintenance cost was divided by the total reported flights. This calculation resulted in an average cost of \$2.62 per flight.
- **Method 2:** Since all wings with glider assigned did not report their minor maintenance expenses, LGM calculated the average cost using only the expenses and hours for the wings that did submit data. We also removed the highest and lowest expense to further normalize the average. This calculation resulted in an average cost of \$2.57 per flight.

Another factor to take into consideration is our glider fleet is relatively new with over 20 new gliders being introduced into the fleet over the past three years. Therefore the requirement for minor maintenance would naturally be low.

Considering all the factors above, HQ CAP/LGM submitted a staff summary sheet through CAP and CAP-USAF channels dated 30 January 2003 with the following recommendation.

“CAP USAF/CC approve a glider flight reimbursement rate of \$3.00 per flight to fund minor maintenance based on the above data.” See *attachment 6*.



Glider Needs in the CAP Program Objective Memorandum (POM)

Discussions with HQ CAP-USAF/FM has revealed that HQ CAP has failed to adequately project Glider Program needs for the future. The only POM that included glider purchases was the 01-06 POM. This POM addressed the NEC decision to purchase 26 gliders between FY00 and FY06. The NEC later voted to rescind their decision and accelerate the purchase of the gliders after Blanik America made a proposal for a significant discount if CAP would accelerate their purchase plan and buy the gliders within a two year period. The 01-06 POM was not changed to reflect NEC direction.

Subsequent POMs have not reflected the need for glider type aircraft. In fact the 04-09 POM and 05-09 POM state C-172 type aircraft. It is obvious that "C-172 type aircraft" are not indicative of CAP's current goals, realizing CAP is not currently purchasing C-172 aircraft in favor of more powerful and more capable general aviation light aircraft to enhance participation in Homeland Security type missions.

HQ CAP/DOT submitted a letter on 13 February 2003, suggesting the POM be changed to say "Light Aircraft" rather than "C-172 type aircraft. (see *attachment 7*) Federal Aviation Regulations (FAR) do not define "Light Aircraft", however FAR Part 1.1, Definitions and Abbreviations, defines "Large Aircraft" as "...aircraft of more than 12,500 pounds, maximum certificated take-off weight." Therefore, it is reasonable that the term "Light Aircraft" is defined as aircraft of less than 12,500 pounds, maximum certificated take-off weight. Changing the POM to reflect "Light Aircraft" will allow CAP-USAF approval of airplane and glider assets as needed in accordance with program goals.

The glider acquisition, as specified earlier in this paper, sets a national glider fleet size of an average of 2 gliders in each CAP wing or 108 gliders. Currently we have a fleet of approximately 46 operational gliders. Reported glider program flight activity has grown an average of 158% over a 3 year period. However, over the last 2 years flight activity growth has leveled out at an average of 22.75%. Therefore, a projected sortie growth of 20% is reasonable. Applying a 20% increase to FY2002 total sortie number of 8,965, indicates 1,793 additional flights will be flown in FY2003 for a total count of 10,759 sorties. Using the utilization rate of 208 sorties per glider per year indicates an additional 5 gliders in 2003 will fulfill the growth requirements of the program and allow the CAP Glider Program to fulfill the demand for cadet glider flights. Continued growth will result in the following requirements.

POM Glider Purchase Requirements							
	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Total Projected Sorties	10,759	12,910	15,492	18,591	22,309	26,772	32,126
Additional Gliders needed	5	10	12	15	18	2 Fleet Goal Met	0 Fleet Goal Met

The recent acquisition of 12 two-place Air Force Academy training gliders will assist in meeting the FY03 and FY04 requirements but will leave a shortfall of 3 two-place gliders.

Glider Acquisition

After successfully operating the Blanik L-23, two-place training glider, for 3+ years the November 2001 National Board voted to make the Blanik L-23 two-place training glider the glider of choice for CAP. See *attachment 8*. That decision was further substantiated when the United States Air Force Academy replaced their entire glider fleet with Blanik L-23, L-13AC, and L-33 aircraft.

In addition to the National Board vote, HQ CAP/DO has coordinated a sole source justification with HQ CAP/LGC. Ensuring the purchase of the gliders are in accordance with appropriate government acquisition regulations. See *attachment 9*.

Once the CAP wing has successfully demonstrated a need and appropriately requests the glider asset, HQ CAP/DOT and HQ CAP/LGM coordinate to ensure the need is present. If it is determined the need is valid and the appropriate funds are available HQ CAP/LGM develops a staff summary sheet with attached justification. The staff summary sheet is then routed through CAP headquarters with the ultimate goal of gaining CAP-USA/CC approval to expend the funds and purchase the glider asset. See *attachment 10*.

Once approval is granted, HQ CAP/LGC will coordinate with Blanik America, Inc. to purchase the glider.

The Blanik L-23 is produced by LETECKÉ ZÁVODY a.s. a respected international aircraft manufacturer based in the Czech Republic that has built more than 14,000 aircraft. The United States distributor is Blanik America, Inc.

Once the purchase order is complete, Blanik America, Inc. coordinates with HQ CAP/LGM to determine a shipping plan. The gliders take approximately six months to produce and ship to the CAP unit. Every glider is shipped directly to a receiving address specified by the CAP glider unit. The gliders are then given a U.S. airworthiness certificate and put into service. The assistance provided by Blanik America, Inc. in the deliver and certification process has been outstanding.

HQ CAP/DO continues to investigate different glider manufacturers and their products to ensure the Blanik L-23 remains the glider of choice. If another glider exceeds L-23's usefulness for the CAP glider operation, HQ CAP/DO would consider the purchase of that glider.



CAP Glider Training Plan

CAP has developed a training plan to assist CAP glider orientation pilots, instructors and students in initial and recurring training requirements. *See attachment 11.*

Senior Members

The CAP Glider Program exists for cadets, however, competent and proficient senior member glider orientation and instructor pilots are essential for program growth and safety.

Initial Flight Training

Each new senior member glider pilot is required to receive a checkout in each CAP glider to be flown. The checkout will be in accordance with the CAP Initial Glider Check Out Program. See attachment. Upon successful accomplishment of the initial training program the new senior member glider pilot will be evaluated, using the CAP Form 5G, to the appropriate standard in accordance with CAPR 60-1.

During the initial CAPF 5G each new senior member glider pilot will be required to demonstrate knowledge of CAPP 52-7 and the maneuvers required to accomplish the glider portion of that pamphlet. Successful accomplishment of the CAP On-line Cadet Orientation Quiz is mandatory.

Recurring Flight Training

CAP senior member glider pilots will maintain FAA passenger carrying qualification at all times. Members are encouraged to use the Glider Proficiency Program Syllabus, when appropriate, to aid in maintaining proficiency.

Cadets

CAP cadets may participate in the glider program through various methods. The Glider Orientation Program specified in CAPP 52-7 prohibits flight training and will not be addressed in this training plan.

Initial Flight Training

Cadets are authorized, in accordance with CAPR 60-1, ab initio and advanced flight training in a glider from authorized CAP Glider Flight Instructors toward the attainment of an FAA pilot's certificate. All flight training will be conducted in accordance with FAR Part 61 and all flight training, dual or solo, will be directly supervised by a CAP Glider Flight Instructor. Cadets will use the CAP Glider Flight Training Syllabus and the Soaring Society of America Flight Training Handbook during their training.

Recurring Flight Training

CAP cadet glider pilots will maintain FAA passenger carrying qualification at all times. Members are encouraged to use the Glider Proficiency Program Syllabus, when appropriate, to aid in maintaining proficiency.

Civil Air Patrol Glider Launch Operations

CAP Gliders are launched either by aero tow or ground launch.

Aero Tow

CAP utilizes CAP corporate tow planes, member furnished tow planes, or tow plane vendors to provide aero tow launches.

CAP corporate tow aircraft consists of Cessna 182, Cessna 172 (180hp), and Maule MT-7-235. Fifteen Maule MT-7-235 aircraft were purchased as primary glider tow and secondary SAR assets. These aircraft were factory modified and equipped to perform CAP glider tow operations. CAP Cessna tow aircraft have been modified with hitch equipment per FAA rules.

CAP and the Soaring Safety Foundation partnered together to develop the world's first and only tow pilot course on the Internet. This course has and continues to provide thorough and standardized instruction for tow pilots worldwide. The course is mandatory for CAP tow pilots and has been adopted as mandatory study by several SSA affiliate glider clubs, as well as, glider clubs in Japan, Egypt, and Brazil. (<http://www.soaringsafety.org/dl.asp>)

When CAP members fly SSA affiliate club tow aircraft as a CAP flight activity in accordance with CAPR 60-1, CAP Flight Management, the aircraft is considered a member furnished aircraft. The flight may be a corporate mission or when towing for a cadet orientation or flight training mission, with the proper approval, could be an Air Force authorized mission with FECA and FTCA protection.

Many of our operations are located at or near SSA affiliate clubs or commercial glider operations. In those cases the club or operator may act as a vendor supplying the tow. In that case the CAP glider activity is responsible for the glider and the tow plane operator is responsible for the tow plane.



Ground Launch

CAP utilizes two methods of ground launch. Auto tow has been successfully used in the Washington Wing and California Wing has used a winch at Los Alamedas. In several years of operation neither operation has had an incident related to glider ground launch. All launches are completed in accordance with the Soaring Society of America Soaring Flight Manual.

Suggested Changes to AFI10-2701

These suggested changes are respectfully submitted in an attempt to help clarify and further justify specific activities that have historically taken place during the administration of the CAP Cadet flying program.

Current Regulation – 21 December 2000

1.5.1.1 Aircraft. CAP maintains a fleet of over 500 aircraft, the majority being Cessna 172 and 182 high-wing single engine light aircraft most commonly used in general aviation for primary flight instruction and recreational flying. These types of aircraft are well suited for the kinds of flying associated with aerial damage assessment, courier operations and search and rescue. These aircraft constitute the primary method of support by CAP during national, regional, or local emergencies or major disasters. CAP also has access to several thousand member-owned aircraft, many being of the same or similar types as CAP-owned aircraft that can be called upon as part of the CAP aircraft resource, though the vast majority of CAP flight operations are performed in CAP-owned aircraft.

Discussion: While Cessna aircraft do make up the majority of the CAP fleet, other aircraft are or will be entering the inventory and this sentence does not accurately portray the CAP aircraft fleet. The paragraph appears to talk in specifics about only a few of USAF authorized missions. Since aircraft are purchased to fulfill more than the mentioned missions, perhaps missions should be explained in more generic terms.

Suggested Revision:

1.5.1.1 Aircraft. CAP owns and maintains a fleet of light general aviation aircraft that includes single-engine and glider aircraft. The aircraft are well suited to perform various Air Force authorized missions including Homeland Security, Search and Rescue, Disaster Relief, and Cadet Orientation, and Flight Instruction. While CAP corporate owned aircraft performs the vast majority of CAP flight activities, CAP does have access to member-furnished aircraft that can be called upon when needed.



1.5.3.2 Activities. The CAP cadet program conducts a variety of local, state, regional, and national level activities designed to provide cadets with exposure to general aviation, flight training, and further academic achievement. These activities enhance CAP's image to the public and serve as an incentive or motivation for the cadet to seek greater participation in the cadet program.

Discussion: This paragraph does not adequately represent the CAP Cadet Program as specified in CAPR 52-16. While the paragraph should not get into specifics about each special activity, it should accurately reflect the major activities available to all CAP cadets and certainly reference the CAP Regulation to ensure the AFI's purpose of explaining the organization and function of CAP.

Suggested Revision:

1.5.3.2 Activities. The CAP cadet program conducts a variety of local, state, regional, and national level activities designed to provide cadets with exposure to general aviation, flight training, and further academic achievement. A Cadet Orientation Flight Program using CAP powered and non-powered aircraft and administered in accordance with current CAP guidance provides exposure to general aviation. Flight training in power and non-powered aircraft is provided during organized flight academies and year-round on an individual basis. Further academic achievement is provided by a number of CAP cadet special activities and during year-round events specified in current CAP guidance. All these activities enhance CAP's image to the public and serve as an incentive or motivation for the cadet to seek greater participation in the cadet program.

4.6.1 Orientation Flights. The Air Force may provide CAP cadets and senior members orientation flights in Air Force aircraft. Such flights can be included as part of planned or scheduled training and operational flight missions. Air Force personnel should consider the purpose of any scheduled or planned flight activities and their suitability as CAP orientation flights.

Discussion: The orientation flights referred to in this paragraph address orientation flights as specified in DoD Regulation 4515.13-R, Chapter 4, ORIENTATION FLIGHTS, not the CAP Flight Orientation program authorized in CAPR 52-16, which are flown in CAP aircraft. The statement "planned or scheduled training and operational flight missions" is unclear and may mislead CAP and CAP-USAF personnel to seek and approve flights that exceed the DoD regulation's definition of "Orientation flights".

Suggested Revision:

4.6.1. Orientation Flights. The Air Force may provide CAP cadets and senior member escorts orientation flights in Air Force aircraft in accordance with DoD directives. These flights are not a part of the CAP Flight Orientation program as directed by CAPR 52-16. Air Force personnel should consider the purpose of any scheduled or planned Air Force flight activities and their suitability as DoD orientation flights and the CAP purpose in requesting the flight.